

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-14. (CANCELED)

15. (CURRENTLY AMENDED) A recombinant expression and cloning vector ~~containing~~ comprising a nucleotide sequence coding for ~~at least part of~~ the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment of *Bacillus thuringiensis*.

16. (CURRENTLY AMENDED) The recombinant expression and cloning vector according to Claim 15, ~~comprising a *HindIII-PstI* DNA fragment constituted uniquely of DNA derived from the~~ wherein the *Bacillus thuringiensis* is *aizawai* 7-29 strain.

17. (CURRENTLY AMENDED) A modified bacterial strain comprising a nucleotide sequence coding for at least part of the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment of *Bacillus thuringiensis*.

18. (CURRENTLY AMENDED) The bacterial strain according to Claim 17, ~~comprising at least one recombinant vector according to Claim 15 or 16~~ wherein the *Bacillus thuringiensis* is *aizawai* 7-29 strain.

19-20. (CANCELED)

21. (CURRENTLY AMENDED) A process for obtaining a nucleotide sequence coding for at least a part of the N-terminal region of a polypeptide toxic specifically toward Lepidoptera of the family Noctuidae, wherein the nucleotide sequence is from an about 3 kb sequence of a HindIII-PstI DNA fragment of *Bacillus thuringiensis*, comprising the following steps:

(a) ~~carrying out a hybridization between~~ hybridizing a sequence of nucleotides from a strain of *B. thuringiensis* active against *S. littoralis* ~~*littoralis*~~, and one or more ~~sequences of nucleotides utilized as hybridization probes,~~ at 42°C in a solution containing 5xSSC, 30% formamide, and 1x Denhardt's, wherein the hybridization probes are derived from nucleotide sequences comprising:

(i) the 5' part of a restriction fragment of a gene for the δ -endotoxin of *B. thuringiensis* that codes for the N-terminal part, amino acids 1-280, of a polypeptide toxic toward Lepidoptera, or

(ii) the 3' part of a restriction fragment of a gene for the δ -endotoxin of *B. thuringiensis* coding for the COOH part, amino acids 621-1175, of a polypeptide toxic toward Lepidoptera,

(b) isolating ~~[[the]]~~ at least one fragment,

(c) cloning the fragment or fragments in a vector, ~~followed by its purification.~~

22. (PREVIOUSLY PRESENTED) The process according to Claim 21, wherein the hybridization probes utilized are obtained from a gene for δ -endotoxin derived from a aizawai 7-29 strain for a protein of 130 kDa active against *P. brassicae* and inactive toward *S. littoralis*.

23. (CURRENTLY AMENDED) The process according to Claim 21 or 22, wherein the fragment in ~~recombined with the vector in the cloning step (b)~~ is elaborated ~~from at least one sequence of nucleotides derived from at least one recombinant vector containing a sequence of nucleotides from at least one strain of *B. thuringiensis*.~~

24. (CURRENTLY AMENDED) The process according to Claim ~~[[23]]~~ 21, wherein the fragment ~~recombined with the vector in the cloning step in (b)~~ is elaborated ~~from several~~ at least 2 sequences of nucleotides from at least 2 different strains of *B. thuringiensis* possessing the same restriction maps and containing all or part of the sequences of nucleotides capable of coding for a polypeptide active toward *S. littoralis*.

25. (CURRENTLY AMENDED) The process according to Claim 23, wherein the fragment recombined with the vector in the cloning step (c) is ~~elaborated from a~~ *HindIII-PstI* restriction fragment derived from the aizawai 7-29 strain.

26. (CURRENTLY AMENDED) The process according to Claim 24, wherein the fragment recombined with the vector in the cloning step (c) is ~~elaborated from a~~ *HindIII-HincII* restriction fragment ~~derived from the *entomocidus* 6-01 strain and from a~~ *HincII-PstI* restriction fragment ~~derived from the aizawai 7-29 strain.~~

27. (CURRENTLY AMENDED) The process according to Claim 22, wherein the fragment fragments ~~recombined according to Claim 25 in step (c) are~~ is carried by a the insert of plasmid pHTA6 and the restriction fragments ~~recombined according to Claim 26, *HindIII-HincII* and *HindIII-HincI* *HincII-PstI*, are carried by which are the~~ respective inserts of recombinant plasmids pHTE6 and pHTA6, ~~said plasmids pHTE6 and pHTA6 being isolated with the aid of a probe constituted by a PvuII fragment of 2 kb of the plasmid pBT15-88 corresponding to the internal part of a gene for the~~

~~chromosomal crystal of the *Berliner* 1715 strain, from transforming clones containing nucleotide sequences derived from *B. thuringiensis* strains active toward larvae of Lepidoptera.~~

28. (CANCELED)

29. (CURRENTLY AMENDED) A process for producing a polypeptide toxic towards Lepidoptera comprising ~~the steps of:~~

(a) expressing the polypeptide in a microorganism capable of expressing recombinant vectors ~~according to any one of claims 15, 16, 37, or 38; and, wherein the recombinant vectors are at least one of:~~

(i) a recombinant expression vector comprising a nucleotide sequence coding for the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment derived from a species of *Bacillus*;

(ii) a recombinant expression vector comprising a nucleotide sequence coding for the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment derived from *Bacillus thuringiensis* or *Bacillus thuringiensis* var. *aizawai* 7-29, and wherein said nucleotide sequence hybridizes to a gene that expresses a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof;
or

(iii) a recombinant expression vector comprising a nucleotide sequence coding for the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment derived from *Bacillus thuringiensis* or *Bacillus thuringiensis* var. *aizawai* 7-29, and wherein the encoded polypeptide is capable of forming an immunological complex with antibodies directed against a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof; and

(b) collecting the expressed polypeptide.

30. (PREVIOUSLY PRESENTED) The process according to Claim 29, wherein the recombinant vectors are introduced into microorganisms living in the environment or in association with plants.

31. (PREVIOUSLY PRESENTED) The process according to Claim 29 or 30, wherein the recombinant vectors are introduced into microorganisms in combination with different δ -endotoxin genes.

32-36. (CANCELED)

37. (CURRENTLY AMENDED) A recombinant expression and cloning vector according to Claim 15, wherein said nucleotide sequence ~~is capable of hybridizing~~ hybridizes, at 42°C in a solution containing 5xSSC, 30% formamide, and 1x Denhardt's, with a gene that expresses a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof.

38. (PREVIOUSLY PRESENTED) A recombinant expression and cloning vector according to Claim 15, wherein the encoded polypeptide is capable of forming an

immunological complex with antibodies directed against a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof.

39. (CURRENTLY AMENDED) A modified bacterial strain according to Claim 17, wherein said nucleotide sequence ~~is capable of hybridizing~~ hybridizes, at 42°C in a solution containing 5xSSC, 30% formamide, and 1x Denhardt's, with a gene that expresses a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof.

40. (PREVIOUSLY PRESENTED) The process according to Claim 29, wherein the microorganism is selected from the group consisting of *E. coli*, *B. subtilis*, *B. cereus*, or *B. thuringiensis*.

41. (CURRENTLY AMENDED) A process for producing plants resistant to *S. littoralis* comprising ~~the steps of~~

transforming a plant sensitive to *S. littoralis* with a recombinant vector ~~according to any one of claims 5, 16, 37, or 38,~~ of at least one of the following:

(i) a recombinant expression vector comprising a nucleotide sequence coding for the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment derived from a species of *Bacillus*;

(ii) a recombinant expression vector comprising a nucleotide sequence coding for the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a *HindIII-PstI* DNA fragment derived from

Bacillus thuringiensis or Bacillus thuringiensis var. aizawai 7-29, and wherein said nucleotide sequence hybridizes to a gene that expresses a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof;
or

(iii) a recombinant expression vector comprising a nucleotide sequence coding for the N-terminal region of a polypeptide specifically toxic toward larvae of Lepidoptera of the family Noctuidae, wherein the nucleotide sequence comprises an about 3 kb sequence of a HindIII-PstI DNA fragment derived from Bacillus thuringiensis or Bacillus thuringiensis var. aizawai 7-29, and wherein the encoded polypeptide is capable of forming an immunological complex with antibodies directed against a polypeptide having the amino acid sequence of SEQ ID NO: 2 or larvicidal fragments thereof,

wherein the transformed plant ~~is capable of~~ produces a polypeptide toxic toward *S. littoralis*.